DOCUMENT RESUME

ED 173 926 **EA 011 932**

AUTHOR	O'Shea, Daniel R.; Piper, Donald L.
TITLE	Saving Money Through Group Bidding by North Dakota School Districts.
INSTITUTION	North Dakota Univ., Grand Forks. Bureau of Educational Research and Services.
PUB DATE	Nov 76
NOTE	38p.; Not available in paper copy due to marginal legibility of original document
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Cooperative Programs; Elementary Secondary Education; *Purchasing; Regional Cooperation; School Districts; *Supplies
IDENTIFIERS	*North Dakota

ABSTRACT

Group bidding and cooperative purchasing of supplies and equipment by school systems is one answer to meeting the demands of rising costs. This paper discusses a survey that was made to determine whether a school district can realize significant savings by participating in a system of cooperative purchasing with other school districts. High school districts in North Dakota were surveyed, and price information was sought on 14 selected items. Prices paid by districts of varying size and geographic location were then analyzed to determine what differences might influence a district toward or away from cooperative purchasing. Results indicated a significant savings occurs when group bidding practices are employed by groups of districts. Some recommendations made were that price information be accumulated at the state level and be disseminated to districts that request it, that an investigation be made of the legality and practicality of group bidding, and that mechanisms be developed through which districts can become informed about and participate in group bidding practices. (Author/LD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

SAVING MONEY THROUGH GROUP BIDDING BY NORTH DAKOTA SCHOOL DISTRICTS

Daniel R. O'Shea
Donald L. Piper

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

"PERMISSION TO REPRODUCE THIS MATERIAL IN MICROFICHE ONLY HAS BEEN GRANTED BY

Larry Smiley

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

-ED173926

EA 011 932

Published by the Bureau of Educational Research and Services

University of North Dakota

November, 1976
No. 6

Grand Forks, North Dakota 58202

SAVING MONEY THROUGH GROUP BIDDING BY NORTH DAKOTA SCHOOL DISTRICTS

by
Daniel R. O'Shea
Donald L. Piper

Bureau of Educational Research and Services
University of North Dakota
Grand Forks, North Dakota

November, 1976

TABLE OF CONTENTS

	Page
FOREWORD	ii
INTRODUCTION	1
METHODOLOGY AND PRESENTATION OF DATA	3
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS	17
APPENDIX A. Letter to Superintendents	25
APPENDIX B. Survey Instrument	27
APPENDIX C. Description of Geographic Regions For School Districts in North Dakota	29
SELECTED REFERENCES	31

LIST OF TABLES

Table

1. Summary of Statewide Prices For Surveyed Items in Comparison with NDSSC and SRSPA Bid Prices	8
2. Price Comparison by Region	14
3. Price Comparison by School Enrollment	16

LIST OF FIGURES

Figure

1. Comparison of NDSSC and SRSPA Bid Prices With Statewide Average	10

FOREWORD

During recent months, several topics of current interest have been dealt with and published by the Bureau of Educational Research and Services. Another in that series of educational concerns is now being made available, thanks to the recent research into group bidding practices for schools conducted by Mr. Dan O'Shea and Dr. Donald L. Piper.

The topic is a current one in light, especially, of the growing interest in financial belt-tightening by many school districts across the state and nation. Group bidding and the concomitant group purchasing arrangements in which several school systems are presently engaged is but one answer.

The authors of this research study have discovered some facts that should be of considerable interest to school superintendents, business managers, and board of education members as they make purchasing arrangements for upcoming fiscal years. Although group bidding and group purchasing may not be a panacea for school's financial plights, some alternative suggestions for partial-solution may emerge as a result of this study.

Larry L. Smiley, Director
Bureau of Educational Research and Services

November, 1976

INTRODUCTION

The public school represents the largest business in most North Dakota communities. The extent to which the school remains capable of maintaining public support and confidence is determined to a large extent by the effectiveness of the prevailing business practices. Recently budgets of school districts have come under careful scrutiny as school boards and administrators endeavor to meet the demands of rising and inflated costs. At the same time, these officials are compelled to maintain a reasonable tax load on school patrons. Prudent fiscal practices and effective management of the district's money is essential to stimulating confidence in the administration and management of the school.

Those who presently manage the school districts in North Dakota may be operating within a limited set of options. Limiting factors may include the size of the district, geographical location, tax base, per capita revenue, and distance from the larger cities. School districts located further from the major cities may be influenced in purchasing decisions by factors such as: (a) transportation, (b) limited quantity of purchases, (c) limited inventory of each item, and (d) limited choice of material for selection.

North Dakota is a rural state. Its high school districts are many. They are usually large in territory with few students per square mile of attendance area. There is a tendency by school boards to purchase many items locally, thus keeping tax money home--feeding money back into the local economy whenever possible. When few items of a kind are purchased, the small district often pays the full price as well as a high delivery charge. A larger district which is located at a transportation and/or industrial center

(e.g., Fargo, Grand Forks, Bismarck, Minot) may have several advantages when purchasing. The larger district can purchase in greater quantity than the smaller rural district and transportation may be less costly.

The major portion of school budgets is tied up in salaries which are contracted as a result of collective negotiations and cannot be reduced in an effort to realize a savings. However, some school districts claim to be making some progress at leveling the school cost curve by processes of purchasing often referred to as group bidding and cooperative purchasing. Hardware and software used in the educational programs and their support services represent a substantial expenditure in most school district budgets. Procedures implemented which effect savings in those funds currently expended for supplies and equipment may impact school district budgets significantly.

In North Dakota, groups of school districts have joined together in order to avail themselves of whatever advantages cooperative purchasing may offer. One group of districts composed of fourteen of the largest school districts in the state is the North Dakota School Study Council (NDSSC). Another group--discovered when the survey was conducted--is the Southeast Regional School Purchasing Association (SRSPA). The NDSSC is composed of representatives of the school districts of: Bismarck, Bottineau, Devils Lake, Dickinson, Fargo, Grafton, Grand Forks, Jamestown, Mandan, Minot, Valley City, Wahpeton, West Fargo, and Williston. The SRSPA includes the school districts of: Chaffee, Edgeley, Ellendale, Enderlin, Hankinson, Kindred, Kulm, LaMoure, Larimore, Lidgerwood, Lisbon, Milnor, Montpelier, Napoleon, North Sargent at Gwinner,

North Central of Rogers, Oakes, Page, Sargent Central at Forman, Sheldon, Verona, Wishek, and Wyndmere.

Representatives of the two organizations of districts listed above have claimed that significant savings in purchasing result from this cooperation. How much saving a school district may realize by participation in a process of cooperative purchasing is the question which has provided the researchers the direction for this study.

Endeavoring to ascertain the extent of savings realized through systems of cooperative purchasing, the researchers conducted a survey of high school districts in North Dakota. Though hundreds of items are purchased by school districts, price information on only fourteen selected items was sought. Prices paid by districts of varying size (enrollment) and varying geographic location were analyzed to determine what differences might influence a district toward or away from cooperative purchasing.

METHODOLOGY AND PRESENTATION OF DATA

A survey was used in this study to help determine whether a school district can realize significant savings by participating in a system of cooperative purchasing with other school districts. The survey included all high school districts in North Dakota, the fourteen members of the North Dakota School Study Council (NDSSC) excepted. These districts were omitted because the bid prices on the survey items were made available to the researchers by a member of the NDSSC. Another group of districts was found to be engaged in group bidding. This group, generally located in the southeastern part of North Dakota, is called the Southeast Regional School

Purchasing Association (SRSPA). Permission was requested to use the group bidding data. This information was reported in the tables and the data analyzed in a manner similar to that of the NDSSC.

Research Questions

The researchers were interested in finding out the following information about each of the selected fourteen items:

1. What was the price paid for each item by region and by district enrollment?

2. What was the range in high price to low price on each item by region and by district enrollment?

3. What was the average and median price paid for each item by region and by district enrollment?

4. How did the prices paid for the fourteen items by non-participating districts compare with prices paid by those districts which were participating in cooperative bidding?

Instrumentation

Six budget categories were selected for the study: (a) Office and teacher supplies, (b) Art supplies, (c) Physical education supplies, (d) Paper supplies, (e) Audio-visual supplies, and (f) Custodial supplies. These categories were chosen because they represent areas in which all NDSSC members made selections in 1975-76. The categories identify budget areas which encompass the vast majority of software items which are purchased consistently by district after district in North Dakota.

More than one thousand separate items are included in the NDSSC bidding system. The researchers attempted to select at least two items in each of the six categories. The purpose of this

strategy was to enhance the opportunity of a survey respondent to have purchased and consequently be enabled to report price data on at least one item in each category. The items ultimately selected are generally representative of high quantity items purchased by NDSSC districts in the 1975-76 bidding. The researchers assumed that those items representing high purchase frequency in the NDSSC districtr would have a comparably high demand by all districts in North Dakota.

The information sought was the price per unit a district paid for each of fourteen selected items in 1975. The items selected were: (a) number two lead pencils, (b) spirit masters, (c) ditto fluid, (d) five-inch scissors, (e) modeling clay, (f) basketballs - leather - Senior High, (g) athletic tape, (h) spirit duplicator paper, (i) red construction paper, (j) white drawing paper, (k) photo copy transparency sheets, (l) thermal spirit masters, (m) toilet paper, and (n) floor finish.

Respondents were simply asked to provide information about the quantity of each item purchased, the price paid per unit, and whether the district was participating in any endeavor of cooperative purchasing with other districts.

Collection of Data

The survey instrument was mailed to all of the approximately two hundred fifty high school districts in North Dakota excepting the fourteen members of the NDSSC. A letter of introduction explaining the purpose and scope of the study accompanied the survey. With address labels provided by the Department of Public Instruction, the letter (Appendix A), and survey instrument (Appendix B) were mailed to the superintendents of each of the school districts.

Self-addressed, stamped return envelopes were included.

Each superintendent was asked to take a few minutes to complete the survey. Each was requested to indicate the quantity purchased and the price paid for each of the fourteen items. Superintendents were assured that the information would not be identified with the names of the district in the reporting of the data. Potential respondents were informed of the researchers' intent to generate data which would support or reject arguments favoring cooperative purchasing. Usable responses were received from eighty-six (41 percent) of the two hundred eleven potential districts (two hundred forty-eight high school districts, less the fourteen members of NDSSC, less the twenty-three members of SRSPA). No attempt was made to follow up those districts who did not return the survey.

Analysis of the Data

The Governor of North Dakota established eight planning regions for the purpose of delivering state services for 1975-77 (see map in Appendix C). The regions referred to in this study are identical to the geographic regions mentioned above.

Districts were listed region by region and the prices paid for each of the fourteen items were charted. Prices were totaled, averages were computed and charted, and the range of high price to low price was identified. Summaries of price comparisons were developed by listing information for all eight regions on a chart including range, median, average, NDSSC bid, SRSPA bid, average savings, and percent of savings for each of the fourteen items.

Size of district comparisons were done for each of the fourteen items by recording the range, median, and average prices for small,

medium, and large districts (by enrollment). Comparisons were made with NDSSC and SRSPA bid prices. Average savings and percent of savings were also charted.

A composite price was computed for each of the fourteen items sampled. The purpose of the composite was to compare all district prices, regardless of size or geographic location, with prices paid by districts engaged in group bidding. The composite range reflects the lowest and highest prices per item across the sample. The composite average is the overall (statewide) average without regard to size or geographic areas. The composite median is the median for the total sample without regard to size or geographical areas. These composite figures permit statewide comparisons.

Statewide Comparisons

The results of this study clearly demonstrate that significant savings occur when group bidding practices are employed. A higher percent of savings resulted in lower priced items as revealed in Table 1. Examples of this which were consistent to both the NDSSC and the SRSPA bidding groups were scissors (52 percent and 62 percent savings); pencils (47 percent and 35 percent savings); spirit masters (39 percent and 36 percent savings); ditto fluid (36 percent and 38 percent savings); modeling clay (39 percent and 38 percent savings); and thermal masters (43 percent and 44 percent savings). Exceptions to this trend were transparency sheets which showed a savings of 26 percent for NDSSC schools and 18 percent for SRSPA schools and drawing paper which revealed savings of 51 percent and 8 percent respectively for these bidding groups. Conversely, higher cost items resulted in a lower percent of savings as shown in basketballs, transparency sheets, and floor finish (see

TABLE 1

SUMMARY OF STATEWIDE PRICES FOR SURVEYED ITEMS IN COMPARISON WITH NDSSC AND SRSPA BID PRICES

Item	Range of Prices	Composite (Average) Price	NDSSC Bid Price	Percent of Savings	SRSPA Bid Price	Percent of Savings
Pencils	$ 3.72 - 10.68	$ 7.01	$ 3.72	47	$ 4.56	35
Spirit Masters	2.25 - 8.00	3.68	2.23	39	2.34	36
Ditto Fluid	1.21 - 5.40	3.05	1.94	36	1.90	38
Scissors	2.25 - 13.08	5.37	2.59	52	2.05	62
Modeling Clay	.65 - .95	.72	.44	39	.45	38
Basketballs	20.70 - 40.00	28.10	22.44	20	26.45	6
Athletic Tape	20.93 - 48.96	27.56	20.49	26	23.20	16
Spirit Duplicator Paper	.81 - 4.39	1.57	1.15	27	1.40	11
Construction Paper	3.02 - 7.20	5.08	3.02	41	3.70	27
Drawing Paper	2.68 - 6.50	4.31	2.12	51	3.97	8
Transparency Sheets	12.69 - 40.45	22.03	16.21	26	18.10	18
Thermal Masters	2.63 - 11.80	5.08	2.89	43	2.84	44
Toilet Paper	12.00 - 36.40	23.19	20.95	10	25.90	-12*
Floor Finish	18.75 - 49.50	29.16	22.53	23	21.50	26

*A negative relationship. The SRSPA bid price is higher than the Composite Price.

Table 1).

The SRSPA bid price for toilet paper was the only instance in which no savings was demonstrated. The SRSPA bid price was more than the composite (average) price. With the exception of this one incidence of negative relationship in prices, a substantial savings was demonstrated in every case.

Figure 1 shows the relationships of prices paid by the two groups of districts which purchase cooperatively, through bidding, to the statewide average price paid for each of the fourteen items. An example of this is in the price paid for pencils. The statewide average price is $7.01 per gross. The NDSSC price per gross is $3.72 and the SRSPA price is $4.56. These prices are compared with the statewide average in Figure 1 as representing prices which are 53 percent and 65 percent of the statewide average price (100%). The other items in Figure 1 are compared in the same fashion with the bid prices shown as percentages of the statewide average price.

Price Comparisons by Regions

North Dakota was divided into eight geographic regions by the Governor of the state in 1975. The purpose of that regional division was to facilitate equity of deliverance of state services. The research for this study employed these identical regional boundaries (see Appendix C for a description of regions.)

The average prices paid for each of the fourteen items within each of the regions are listed in Table 2. These prices were compared with the NDSSC and SRSPA bid prices to note geographical differences. The following items are noted as relevant information pertaining to regional comparisons:

FIGURE 1 - COMPARISON OF NDSSC AND SRSPA

BID PRICES WITH STATEWIDE AVERAGE

1. No school district in Region I reported prices for pencils.
2. One school district in Region I reported purchasing spirit masters.
3. In the case of scissors, a relatively inexpensive item, twenty-six different prices, with a difference of $10.83 from lowest to highest price, were reported. This phenomenon is an example of what occasionally occurred in this study. In this instance, as in several other instances, an unusually high or unusually low price for a particular item was reported. The highest price for scissors paid by one school ($13.08) was $4.68 more than the next highest price reported ($8.40). This high price was more than two and one-half times the median price ($4.95). It is not the researchers' intent to dispute quoted prices; the intent here is to literally expose these unusual prices as unexplained phenomena which were revealed in the study. However, these unusually high and/or low prices may tend to create a distorted difference favoring or disfavoring cooperative bidding.
4. One school in Region I reported purchasing clay; no school in Region II reported purchases of clay.
5. One school in Region I reported purchasing white drawing paper. Regions II, III, V, and VI showed average prices which were less than the SRSPA bid price ($3.97) for white drawing paper.
6. No school in Region I reported purchasing transparency sheets.
7. Fewer schools reported prices for toilet tissue than any

other item. Prices reported for toilet tissue showed the least advantage for group bidding of those items in the study. A comparison of region averages with the SRSPA bid prices revealed the region averages lower than the bid price for toilet tissue in every instance.

8. The prices reported for floor finish demonstrate a greater range than any of the other items studied.

The information included in Table 2 is of speculative interest. Assuming the data to be accurately predictive, it would appear that schools in Regions I, V, VII, and VIII have the best chance of securing a price for school supplies which is lower than the statewide average. Schools in Regions II, III, and VI are likely to pay a higher price for supplies than the statewide average. In comparing the NDSSC and SRSPA bid prices, Table 2 shows greater savings occurring very consistently when comparing prices with Regions VI, II, and III in that order. However, it is noted that substantial savings were in evidence throughout the comparisons of the various regions favoring the schools engaged in group bidding.

Price Comparisons by District Enrollment

All high school districts in the state were invited to participate in the survey which sought price information on the fourteen selected school supply items. Of the two hundred eleven school districts who purchase independently, eighty-six (41 percent) contributed substantial information to the present study. The eighty-six participating districts were divided into three arbitrary sizes with approximately one-third distributed to each category. The enrollment categories chosen were 0-175 students, 176-300

TABLE 2

PRICE COMPARISON BY REGION

Item	Average Prices By Regions								NDSSC Bid	SRSPA Bid
	I	II	III	IV	V	VI	VII	VIII		
Pencils	*	7.45	10.09	7.44	6.01	7.45	5.93	7.32	3.72	4.56
Spirit Masters	2.85	3.53	4.71	3.90	3.64	3.62	3.16	3.45	2.23	2.34
Ditto Fluid	3.16	3.11	3.24	2.74	3.01	3.44	2.41	3.00	1.94	1.90
Scissors	4.36	5.80	6.99	5.28	3.26	6.12	4.56	4.88	2.59	2.31
Modeling Clay	.70	*	.72	.69	.74	.67	.78	.69	.44	.45
Basketballs	30.81	30.04	26.95	27.26	25.63	31.08	29.48	25.74	22.44	26.45
Athletic Tape	29.13	29.34	26.02	26.53	24.95	32.97	26.42	28.46	20.49	23.20
Spirit Duplicator Paper	1.28	1.58	1.44	1.72	1.57	1.88	1.50	1.58	1.15	1.40
Construction Paper	4.46	5.34	5.09	5.58	5.05	5.90	4.83	5.05	3.02	3.70
Drawing Paper	5.40	3.96	3.56	4.95	3.85	3.48	4.67	4.14	2.12	3.97
Transparency Paper	*	18.11	23.38	19.27	29.38	20.38	21.75	18.53	16.21	18.10
Thermal Masters	4.60	4.96	5.73	5.25	5.12	5.36	4.20	4.52	2.89	2.84
Toilet Tissue	17.95	25.88	22.83	23.60	23.70	22.76	23.17	22.69	20.95	25.90
Floor Finish	20.00	21.72	25.70	27.03	28.75	20.19	31.88	31.05	22.53	21.50

*No price received from this region for this item.

students and above 300 students. These categories may be referred to elsewhere in the study as small (0-175), medium (176-300) and/or large (above 300).

School district enrollment comparisons of prices paid by schools purchasing independently with the prices accepted by NDSSC and SRSPA bidding are revealed in Table 3. In this table ranges of prices, medians, and averages are listed in addition to the NDSSC and SRSPA bid prices and the average savings and percent of savings for each in comparison with the average of prices paid by the various sizes of schools for each of the fourteen items surveyed.

Assuming that, on the average, one size of school is likely to pay the highest price, another the second highest price, and the other the lowest price, a comparison of the three sizes of schools as revealed on Table 3 is quite interesting. The researchers discovered that small schools had the highest average price on the fourteen items seven times and the second highest average price six times. There was only one item for which small schools reported the lowest average price (spirit masters). Medium sized schools were identified as having the highest average price on only four items, the second highest average price on three items, and lowest average price on seven items. Large schools had similar success having the highest average price on three items, the second highest average price on five items, and lowest average price on six items.

The bid prices of NDSSC and SRSPA schools are an interesting constrast with prices paid by all three sizes of districts in the study. On every item but toilet paper there was a savings ranging from a low of 20 percent (basketballs) to a high of 52 percent

TABLE 3

PRICE COMPARISON BY SCHOOL ENROLLMENT

Item	Average Prices by School Enrollment			NDSSC Bid Price	Percent of Savings	SRSPA Bid Price	Percent of Savings
	Small (0-175)	Medium (176-300)	Large (Above 300)				
Pencils	7.34	6.48	6.98	3.72	47	4.56	35
Spirit Masters	3.53	3.63	3.88	2.23	39	2.34	36
Ditto Fluid	3.26	2.89	2.98	1.94	36	1.90	38
Scissors	5.04	6.36	4.71	2.59	52	2.05	62
Modeling Clay	.76	.69	.71	.44	39	.45	38
Basketballs	29.13	27.41	27.48	22.44	20	26.45	6
Athletic Tape	27.99	28.61	26.18	20.49	26	23.20	16
Spirit Duplicator Paper	1.61	1.69	1.41	1.15	42	1.40	11
Construction Paper	5.17	4.82	5.26	3.02	41	3.70	27
Drawing Paper	4.31	4.44	4.19	2.12	51	3.97	8
Transparency Sheets	23.64	20.87	22.26	16.21	26	18.10	18
Thermal Masters	5.68	4.59	4.39	2.89	43	2.84	44
Toilet Tissue	23.08	22.89	23.61	20.95	10	25.90	-12*
Floor Finish	30.16	28.92	28.49	22.53	23	21.50	26

*A negative relationship. The SRSPA bid price is higher than the average price.

(scissors) for NDSSC member schools. SRSPA schools revealed savings from a low of 6 percent (basketballs) to a high of 62 percent (scissors). Table 3 shows NDSSC schools as demonstrating a savings of 25 percent or more on ten items. SRSPA schools exhibit savings of 25 percent or more on seven of the fourteen items surveyed.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The advantages and disadvantages of school districts purchasing independently or securing supplies through a system of bidding are varied. Of certainty is the fact that there are strong arguments favoring both systems. The purpose of this study was to find out if the data would support arguments which claim that school districts might save more when they purchase through cooperative bidding than when they function as independent buyers. To initiate the study, a survey was taken of all North Dakota high school districts which were known to be non-participants in group purchasing. The results sought were the cost differences of fourteen selected items. The differences were studied in order to generate comparative data in relation to: (a) geographic region, (b) size of school district, and (c) comparison to bids accepted by the North Dakota School Study Council (NDSSC) and the Southeast Regional School Purchasing Association (SRSPA).

Limitations of the Study

This study was confined to public schools in North Dakota. Private and U. S. government schools were not included. The research endeavor included all public high school districts in the state. Although the results reveal adequate response, the study represents only 41 percent of those districts invited to participate.

Hundreds of items are purchased by school districts throughout the state. This study, however, was limited to fourteen of the most commonly purchased items.

The description of items in the survey may not have been specific enough to assure that all figures reported were comparable, although there was no evidence to suggest that this was a problem. Quantity and shipping charges for items purchased are other factors which may affect the prices which were reported by the districts.

Conclusions

Regardless of the foregoing limitations, the data revealed by the present study clearly showed the advantages in cost savings which result from cooperative bidding practices by groups of districts.

The public expects its institutions to do whatever is legally possible to purchase quality items as cheaply as they can. Often there is considerable pressure on school boards and administrators by businesses to purchase locally. Whether the price is high or low makes little or no difference to those who are persuaded that school boards should keep the tax money at home.

It is generally accepted that our public institutions must be accountable for prudent fiscal management. At this time, more than in any other period in the history of education, more money is being spent on supplies, equipment, salaries, buildings, and all other areas of school budgets. School board and school patron inquiry and involvement concerning how money is spent is increasing daily as all the affairs of school operation become scrutinized by an increasingly aware and educated public. School operation and management must exhibit a high degree of effectiveness and efficiency

in order for board members and administrators to maintain their respective positions of leadership.

For a small district purchasing few of any one item, the time group bidding takes may not offset the savings. But what is the implication across the state for all the districts? If 20 percent or more can be saved on each type of item purchased throughout the state, consider how much money could be saved in all the districts should they be afforded group bidding opportunities.

The data revealed by the present study provide substantial argument in favor of a statewide system of bidding practices. The larger districts do not normally gain as much from group bidding as do other smaller districts. This is due primarily to the fact that larger quantities of items purchased allow the larger district a substantial price break. The group bidding process thus enables the smaller districts to obtain the advantages presently provided their larger partners. The data in the present study reveal emphatically the advantages group bidding participants have in purchasing. Group bidding advantage was shown by both NDSSC and SRSPA on the majority of items selected for study with savings of more than 25 percent in evidence. The larger quantity bidding NDSSC exhibited savings of 20 percent to 52 percent on thirteen of the fourteen items studied. This shows that the practice of purchasing in larger quantities has a definite effect on amount of savings realized. It is the opinion of the researchers that this would represent a significant savings in any business.

Based upon an analysis of the data obtained, the following conclusions are drawn:

1. There was evidence that some difference exists between

regions in the prices paid for the fourteen items selected. A study of the various average prices revealed by regions provided the following information:

(a) Region VIII did not show the lowest price on any item, yet listed the second lowest price on five items and the third lowest price on four items.

(b) Region VII listed the lowest price on three items, the second lowest price on two items, and the third lowest price on three items.

(c) Region V showed the lowest price on three items, the second lowest price on one item, and the third lowest price on three items.

(d) Region I, although listing the lowest price on four items, the second lowest price on one item, and the third lowest price on one item, revealed prices in the three highest price categories on two items.

(e) Region VI showed the highest price on five items and the second highest price on two items.

(f) Regions II, III, and IV listed prices in the three highest price ranges on six items.

Assuming the regional price information revealed above to be consistently accurate, some basis for making prediction is revealed. It appears that school districts included in Regions V, VII, and VIII are likely to pay lower prices on the average than school districts located in the other regions. School districts in Regions II, III, IV, and VI are more likely to pay higher prices on the average than districts of other regions.

2. The range in prices often varied as much within regions and district sizes as it did across the regions and for all the district sizes. Although the items are often the same brand, size, and quality, the suppliers vary considerably in the retail price offered to schools in the same region and to regions with boundaries which are contiguous.

3. Advantages in prices for group bidding schools were obvious with the exception of toilet paper. To some, any savings in purchasing by public institutions is a significant savings. The present study revealed a savings of 25 percent or more for NDSSC and SRSPA groups on at least half of the fourteen items selected for the study. The NDSSC showed a savings of from 10 percent to 52 percent. On five items the savings to NDSSC schools was 40 percent or more. Eight items showed a savings of 30 percent or more. Ten items showed savings of 20 percent or more. The SRSPA listed savings of from -12 (or no savings) to 62 percent. SRSPA schools listed a savings of 40 percent or more on two items, 30 percent or more on six items, and 25 percent or more on eight items. SRSPA schools showed a savings of 18 percent or less on six items.

Recommendations

Considering the limitations of the study and the conclusions drawn from the data, the following recommendations are presented:

1. Further research should be conducted on this topic which will ascertain the feasibility of greater participation by school districts in group bidding. Some questions suggested by the researchers which seem pertinent at this time follow:

(a) Are the items selected for this study typical of all supply items?

(b) Do school districts which are not presently participants of group bidding want to become involved?

(c) How much information about group bidding do school districts have when they are not participating in group bidding?

(d) What are the problems for a district engaged in group bidding?

(e) What are the quantities of the various supply items purchased in North Dakota?

(f) What amounts of money could be saved by total participation in a program of group bidding by all districts in North Dakota?

(g) What are the reasons why cooperative purchasing has not gained wider acceptance?

(h) Are users (janitors, teachers, students) satisfied with items purchased by group bidding?

(i) What is the optimum size of a cooperative purchasing organization?

2. It is recommended that price information be accumulated at the state level and disseminated to districts which request it.

3. It is recommended that organizations such as the Department of Public Instruction and the North Dakota School Boards Association investigate the legality and practicability of group bidding opportunities in order to establish format and procedures by which school districts might become involved in multiple district bidding.

4. It is recommended that the North Dakota state legislature develop the mechanisms through which a district might more easily become informed about and ultimately voluntarily participate in a statewide system of purchasing through bidding of school supplies and equipment.

5. It is recommended that other districts seriously consider the possibility of joining together in some trial attempts at group purchasing or group bidding.

It is the researchers' opinion that patrons of schools are interested in the best possible education for their children and are willing to pay the cost. They also want schools managed in efficient and effective ways. This includes purchasing wisely and well. It follows that some form of organization which would effect a savings of 20 percent or more would be desirable and should be implemented. It is recognized by the researchers that a system as suggested would need a highly sophisticated process, probably requiring technical and computer services. This technology, perhaps already accessible at the state level, may not be available at the local district level.

In order to maintain the very important criteria of local control a school district should probably not be forced into a business practice unless the local school board so decides. However, the opportunity to engage in group bidding and the information about its apparent success is not now readily available to most local school boards. Perhaps an agency of the state could develop the mechanism (after the development of quantity and price history) whereby bids on supplies and equipment could be let and accepted. School districts when informed of the bid prices could at that time

decide which supplies and equipment they would want to purchase from the state bid. This is not to say that all schools should be mandated to participate in a bidding system as this practice would remove control from the local school district board. However, mechanisms such as the one described above could be developed which do not in any way interfere with the decisions made by local school boards. It seems that decisions on the local level could be better decisions as the boards would have more information on supplies and equipment prices on which to base their decisions.

APPENDIX A

LETTER TO SUPERINTENDENTS

Dear Sir:

Perhaps you are aware that the North Dakota School Study Council (made up of 14 of the larger districts in the state) purchases many school supplies and some equipment cooperatively. Study Council member districts may save considerable money in this endeavor. How significant a savings occurs remains to be discovered. It is the purpose of this study to analyze possible savings in selected areas of school supply purchases across the state.

I am an elementary school Principal enrolled in the Educational Administration Specialist Program at the University of North Dakota. This study is being made in partial fulfillment of the requirements of this degree.

With your assistance in completing the information requested on the back of this page, we will develop a cross section of data which can be compared with the Study Council purchase prices on a sample of items. The data will also be compared by school size and geographic location. Although information is being collected from individual school districts, school districts will not be identified by name in the reporting of the data. Information will be reported by geographic region, rather than by individual school districts. It is my intent to develop some data which will support or reject the arguments favoring cooperative purchasing.

Your assistance will automatically place you on the mailing list to receive comparisons of the data relative to your district for possible help in future decisions in purchasing. More complete dissemination of the data from the study is being planned with the State Department of Public Instruction. We expect that it will be included with a mailing of the Education Bulletin.

It will take you but a few minutes to provide the information requested on the form on the back of this page. I know how busy you are, so I ask that you complete this right away and return it no later than November 15, 1975, in the enclosed, stamped, self-addressed envelope. Your assistance will be helpful to me, but more important, could aid Superintendents across the state in making purchasing decisions.

Yours truly,

Dan O'Shea

APPENDIX B

SURVEY INSTRUMENT

PURCHASING SURVEY

Are you presently participating in cooperative purchasing with another district or districts? _____No _____Yes
(If so, how many other districts? _____)

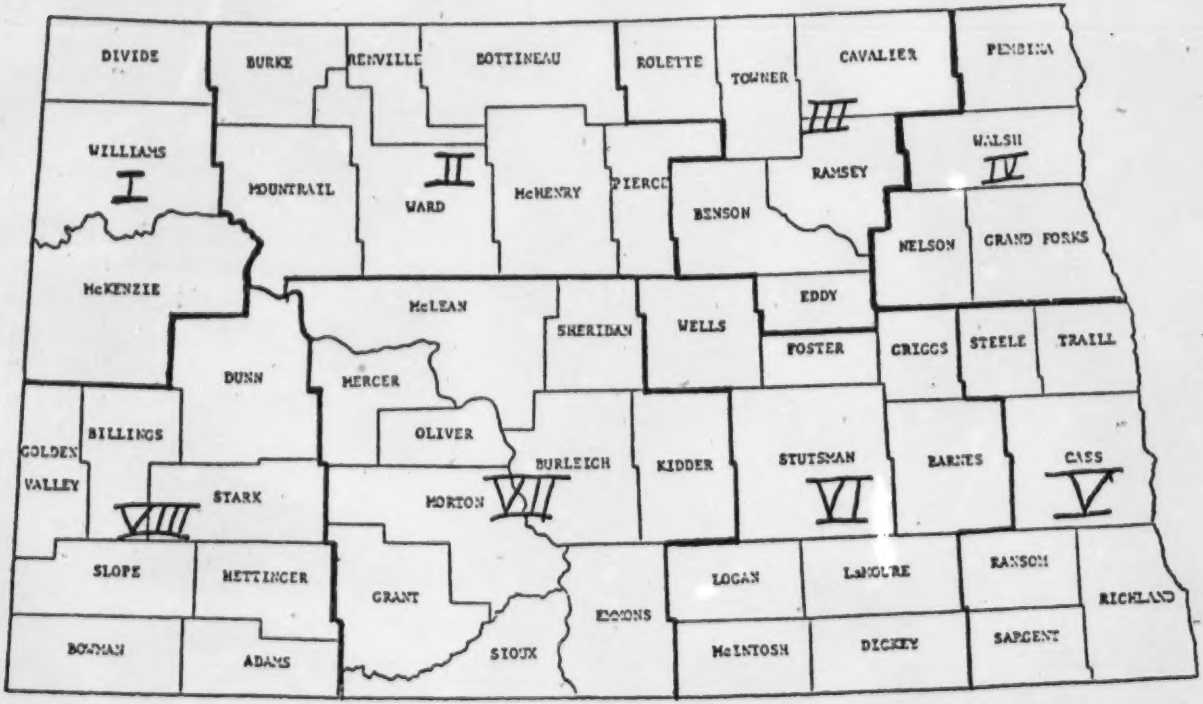
Budget Category	Item	Quantity Purchased*	Price Paid Per Unit**
Office and Teaching Supplies	No. 2 lead pencils		gross
	Spirit Masters Medium, 100 per box		box
	Ditto Fluid		gal.
Art Supplies	Scissors 5", rt. hand, pointed		doz.
	Modeling Clay 4 - 1/4 lb. squares		lb.
Physical Education Supplies	Basketballs - Leather		each
	Athletic Tape 32 roll speed pack		pack
Paper Supplies	Spirit Duplicator Paper 8 1/2 X 11, 16#		ream
	Red Construction Paper - 9 X 12		ream
	White Drawing Paper - 9 X 12		ream
Audio-Visual Supplies	Photo Copy Transparency Sheets 8 1/2 X 10 1/2, black image on clear		box
	Thermal Spirit Masters		box
Custodial Supplies	Toilet Paper - rolls 100 rolls per case		case
	Floor Finish - 5 gal. drum		drum

* 1975-76 (If none purchased, leave that item blank)
** Delivered price

APPENDIX C

DESCRIPTION OF GEOGRAPHIC REGIONS FOR SCHOOL DISTRICTS IN NORTH DAKOTA

NORTH DAKOTA



30

SELECTED REFERENCES

SELECTED REFERENCES

Cerrito, August E. Handbook for Educational Finance Management for the State of New York. Albany, New York: New York State Education Department Press, 1976.

Cohodes, Aaron, ed. 127 schools lump purchase orders together. Nations Schools, 1965, 76, 44-45.

Delano, John; Simpson, George; and Wizeman, William. How to save money through cooperative purchasing. School Management, 1963, 7, 50-53.

Department of Public Instruction. North Dakota Educational Directory 1975-76. Bismarck, North Dakota.

Department of Public Instruction. North Dakota Century School Code. Bismarck, North Dakota, 1971.

Forsythe, Ralph A., and Hardin, Claude E. Development of Guidelines for Cooperative Purchasing Agencies and Procedures for Public School Districts. Final Report. Washington, D.C.: Office of Education (DHEW), 1969. (ERIC Document Reproduction Service No. ED 029 485).

Hill, Frederick W. School Business Administration in the Smaller Community. Minneapolis: T. S. Dennison and Co., Inc., 1964.

Kentucky School Business Officials Association and the Bureau of Administration and Finance of the Kentucky Department of Public Instruction. Purchasing Manual. January 1968.

Knezevich, Stephen J., and Fowlkes, John G. Business Management of Local School Systems. New York: Harper and Brothers, 1969.

Linn, Henry H. School Business Administration. New York: Ronald Press Company, 1956.

North Dakota School Study Council Minutes. (Obtained from Grand Forks Public Schools, Grand Forks, North Dakota.) November 13-14, 1968.

Plotkin, Morris. Los Angeles City School District plan for cooperative purchasing. American School Board Journal, 1941, 103, 47-48.

Whitt, Robert L. Structuring Education for Business Management. Lincoln, Nebraska: Great Plains School District Organization Project, 1969. (ERIC Document Reproduction Service No. ED 074 577).

Other reports available from the Bureau of Educational Research and Services:

No. 1, June, 1976, "Expectations for the Role of Superintendent of Schools," by Mark S. Sanford and Donald L. Piper, $.50

No. 2, June, 1976, "The Development of a Three Digit Occupational-Personality Holland Code for Male Secondary School Principals in North Dakota," by Barbara E. Ochiltree, $1.00

No. 3, July, 1976, "Teacher Needs in North Dakota: 1976-1981," by Larry L. Smiley and Sylvia E. Stites

No. 4, September, 1976, "An Examination of the Utility and Validity of the Learning Disabilities Construct," by Walter S. Mabee, $1.00

No. 5, September, 1976, "Morale and Professional Activities in Selected Small North Dakota Schools," by Quinn Brunson, $1.50

"Clause-by-Clause Listings of Teacher Association and School Board Agreements in Effect in Selected North Dakota School Districts to June 30, 1976," by Charles W. Potter, $3.00

Bureau of
Educational
Research and
Services

University of North Dakota, Grand Forks, North Dakota 58202